



GEORGE HILL ROAD

Renovation and Paving
Project



Project Overview

By the numbers

- George Hill is a scenic road 2 Miles in length
- Previous substrate is oil and stone.

Costs

- Engineers estimate the project will be roughly \$7 Million Dollars.
- Cost varies with conditions at the time of construction.

Major Limiting Factors

- Stormwater
- Width/Scenic Road
- Substrate/ledge

Budget

- Supporting costs of this size are difficult with current Asphalt Management Plan.
- No capacity for borrowing within levy.

A photograph of a small stream flowing through a wooded area. The water is shallow and clear, reflecting the surrounding environment. The streambed is composed of small rocks and pebbles. The banks are covered with fallen brown leaves and some small branches. The background is a dense forest with trees and foliage.

Stormwater

- Primary route of water is from the East.
- Water drains to the West and contributes to the Miscoe Brook, Cider Mill Pond, and Silver Lake.
- Most of the road is currently served by country drainage, old culverts, and natural topography.

Stormwater

- Runoff collects in wetland areas just off the layout of the road
- With higher water events or wet seasons, this water floods the road
- Storm water runoff wetlands would be kept in place
- Upgraded infrastructure will help shed this water during these wet times

Stormwater

- Project adds stormwater infrastructure.
 - Preserves road integrity
 - Moves water more efficiently
 - Will be in compliance with Grafton's Storm Water Bylaw
 - Uses existing long-term outfalls
 - Reduces stagnant water in country drainage
 - Reduces water on roadway creating safer driving environment





Width/Scenic Road

- Existing lane width is reduced by country drainage
 - New roadway layout is 20ft
- Edge of the road erosion and deterioration impacts width
 - New layout contains water on roadway
- Scenic road trees and stone wall considerations
 - Project maintains stone walls and removes trees only where necessary



Substrate/Ledge

- Current conditions limit ability to simply mill and overlay
- Oil and stone layers now present, however, milling would be less effective due to conditions on most of the length of the project
- Typical leveling processes less beneficial due to surface rock and ledge



Project Finances

Current Financial Conditions



Grafton's Current Annual Funding:

\$1.5 Million per year as Road Stabilization

- This is excluded debt.

\$500,000 in Chapter 90 Funds

- Amount fluctuates based upon State budget
- Municipal Stabilization
 - \$4,284,251 Stabilization



Grafton's Current Usage:

All funds are expended on maintaining Asphalt Management Plan, replacing bridge and culvert infrastructure, and replacing supporting structures or projects.

Funding Options

Debt Exclusion and MassWorks Grant

- This is best case scenario in terms of:
 - Municipal Budget Impact
 - Asphalt Management Plan continuation

Stabilization and MassWorks Grant

- Best case scenario in terms of:
 - Tax burden

Debt Exclusion, Stabilization, and MassWorks Grant

- Optimal usage of finance options
 - Still reduces amount of Asphalt Management Plan completed each year
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Debt Exclusion and MassWorks Grant

- Cost per household with no grant award:
 - \$7,000,000 - \$96.51 per year
- Cost per household with maximum grant award (\$2M):
 - \$5,000,000 - \$66.03 per year

Stabilization and MassWorks Grant

Pros:

- No cost per household additional



Stabilization and MassWorks Grant

Stabilization Funds		
<u>Name</u>	<u>From Segment</u>	<u>To Segment</u>
CHRISTMAS TREE LANE	SNOW RD	SUZANNE TERRACE
CREEPER HILL ROAD	TOWN LINE	MILLBURY TOWN LINE
CROSBY ROAD	BRIGHAM HILL RD	MILLBURY ST
FRANKIE LANE	SUZANNE TER	CUL DE SAC
HUDSON AVENUE	BRIGHAM HILL RD	MILLBURY ST
OAK RIDGE LANE	MILLBURY ST	SEAN MIKEAL WAY
RITTENHOUSE ROAD	STRATTON RD	CUL DE SAC
SEAN MIKEAL WAY	MILLBURY ST	CUL DE SAC
STRATTON ROAD	OLD UPTON RD	DEAD END
SUZANNE TERRACE	SNOW RD	SUZANNE TER (LOOP)

Cons:

- Results in a roughly 31% decrease in public infrastructure repair and Replacement

Currently using:

- Chapter 90
 - Stowe Road Culvert
 - Fitzpatrick Road Bridge
 - Easements for Millbury Street Sidewalk
 - Main Street Easements

Debt Exclusion, Stabilization, and MassWorks Grant

- Cost per household with no grant award:
 - \$7,000,000
 - \$315,000 Road Stabilization
 - \$315,000 Debt Exclusion - \$48.26 per year @ 15 years
- Cost per household with maximum grant award (\$2M):
 - \$5,000,000
 - \$315,000 Road Stabilization
 - \$315,000 Debt Exclusion - \$33.02 per year @ 15 years

Questions?

